

Faculty of Engineering & Technology

General Geology

Information :

Course Code : GEO 201

Level : Undergraduate

Course Hours : 2.00- Hours

Department : Department of Petroleum Engineering

Instructor Information :

Title	Name	Office hours
Associate Professor	Ashraf Fahmy Mohamed Ismael	2
Teaching Assistant	Amera Alaa Mohammed Ali	

Area Of Study :

- Expand the scope of knowledge of the petroleum engineer to include the Earth's internal structure and its internal and external processes.
- Identify the different rock-forming minerals, their origin, and the different type of rocks.
- Produce the topographic and geologic maps and their implications.

Description :

The course covers cosmology and Earth formation, mineralogy, different rock types, sedimentary processes, volcanoes, geologic time, plate tectonics and crustal deformation, earthquakes, surface processes of erosion, weathering in different geologic environments and surface- subsurface ground water.

Course outcomes :

a.Knowledge and Understanding: :

1 -	Identify different types of minerals and rocks
2 -	Describe different Earth's internal and external processes.
3 -	Construct and interpret topographic and geologic maps.

b.Intellectual Skills: :

1 -	Solve geologic mapping problems.
2 -	Construct cross sections and contour mapping of surface and subsurface geological formations.
3 -	Differentiate between reservoirs and non-reservoir rocks.

c.Professional and Practical Skills: :

1 -	Students have broad understanding of geological knowledge and supporting field, laboratory, and computer skills.
2 -	Analyse available data and material for subsurface geological evaluation.

d.General and Transferable Skills: :

1 -	Ability to work in team.
2 -	Communicate effectively.

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction	2	2	0
Plate Tectonics	4	4	0
Crystallography, Minerals and Rocks	6	2	4
Rock types	8	6	2
Topographic and Geologic maps	14	6	8
Rock Deformation	4	4	0
Water and surface processes	2	2	0
Structural Geology and Earthquakes	4	4	0

Teaching And Learning Methodologies :

Interactive Lecturing
 Problem Solving
 Cooperative research
 Field trip

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignment	10.00		
Cooperative research	10.00		
Final Exam	40.00		
Mid- Exam	25.00		
Participation	10.00		
Quizzes	5.00		

Recommended books :

Tarback, Frederick K. Lutgens, Dennis G Tasa - Earth_ An Introduction to Physical Geology (11th Edition) (2013, Prentice Hall)

Periodicals :

Teaching this course needs: Crystal models, Mineral samples, and Rock samples.